522,465

(12) INTERNATIONAL APPL

TION PUBLISHED UNDER THE PATENT COOK

TION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau

(43) International Publication Date 12 February 2004 (12.02.2004)



PCT

(10) International Publication Number WO 2004/013955 A1

(51) International Patent Classification⁷:

H03D 3/00

(21) International Application Number:

PCT/IB2003/003191

(22) International Filing Date:

1 C1/1B2005/005171

11 July 2003 (11.07.2003)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 02/09744

31 July 2002 (31.07.2002) FR

- (71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): HUMBERSOT, Alexandre [FR/FR]; 156 Boulevard Haussmann, F-75008 Paris (FR).
- (74) Agent: OUDHEUSDEN-PERSET, Laure; Société Civile SPID, 156 Boulevard Haussmann, F-75008 Paris (FR).

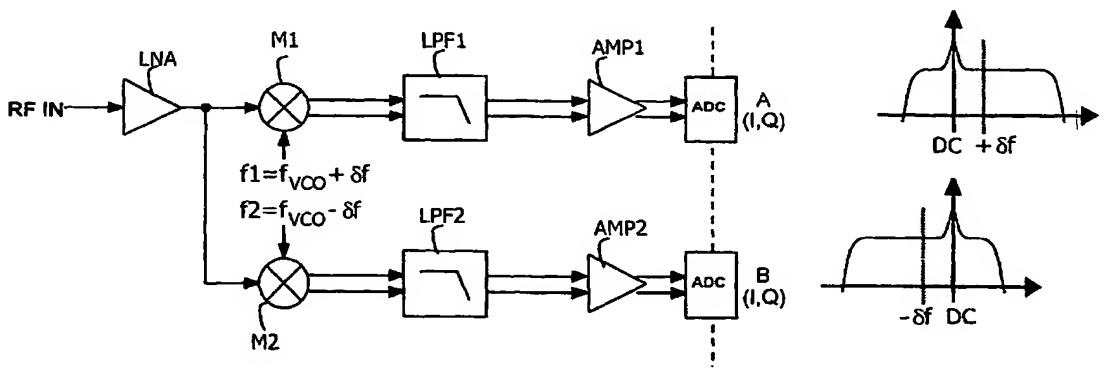
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: RECEIVER COMPRISING MULTIPLE PARALLEL RECEPTION MEANS



(57) Abstract: The invention relates to a receiver for receiving an analog signal having a spectrum situated in a given frequency band higher than the baseband. It comprises reception means which manage at least one narrow-band noise signal located around a given noise frequency. The receiver comprises a plurality of parallel baseband conversion means defining a plurality of reception channels for converting the spectrum of the received signal in reception bands close to the baseband and shifted with respect to one another so that, on each reception band, the narrow-band noise is superimposed on the shifted spectrum of the received signal at distinct points relative to said spectrum. It also comprises recombination means for recombining the many shifted spectra of the received signal obtained on each reception channel and for obtaining a single spectrum corresponding to the spectrum of the received signal with the effect of the narrow-band noise removed and situated in a frequency band close to the baseband.

4/013955

INTERNATIONAL SEARCH REPORT

PCT /TO	0.000
LCI/IR	23191

Α.	CLA	SSIFIC	ATION	OF S	UBJECT	MATTER
TP	7	7	HUSI	フ 2/(ስ በ	

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols) IPC 7 HO3D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Α	WO 93 07676 A (THOMSON CSF) 15 April 1993 (1993-04-15) page 6, line 1 -page 7, line 31; figure 2	1,8
A	EP 1 111 803 A (MOTOROLA INC,) 27 June 2001 (2001-06-27) column 2, line 29 - line 48 column 3, line 33 -column 4, line 46; figure 1	1,8
Α	US 6 185 248 B1 (R. WIEGAND) 6 February 2001 (2001-02-06) column 2, line 63 -column 3, line 28 figures 2,3	1,8
A	WO 99 14863 A (ITALTEL SPA.) 25 March 1999 (1999-03-25) page 6, line 25 -page 9, line 10; figure 2	1,8

X Further documents are listed in the continuation of box C.	Patent family members are listed in annex.
 Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed 	 "T" later document published after the International filling date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
Date of the actual completion of the International search	Date of mailing of the international search report
1 October 2003	09/10/2003
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL – 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer Butler, N

INTERNATIONAL SEARCH REPORT

PCT/TB 22 03191

C.(Continua	ation) DOCUMENTS CONSIDERED TO ELEVANT	PCT/IB 03/03191
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 99 41851 A (LM ERICSSON) 19 August 1999 (1999-08-19) page 4, line 8 -page 5, line 5 page 7, line 23 -page 11, line 10 page 12, line 28 -page 15, line 13; figure 5	1,8
		
	-	
	•	

INTERNATIONAL SEARCH REPORT

PCT/1B **L**03191 remeation Patent document Patent family Publication cited in search report member(s) date date WO 9307676 Α FR 15-04-1993 2682249 A1 09-04-1993 AU 663114 B2 28-09-1995 ΑU 2560592 A 03-05-1993 CA 2120344 A1 15-04-1993 DE 69208677 D1 04-04-1996 DE 69208677 T2 11-07-1996 EP 0607176 A1 27-07-1994 ES 2084380 T3 01-05-1996 WO 9307676 A1 15-04-1993 US 5742645 A 21-04-1998 EP 1111803 Α 27-06-2001 EP 1111803 A1 27-06-2001 2001217800 A JP 10-08-2001 US 2001014594 A1 16-08-2001 US 6185248 **B1** NONE 06-02-2001 WO 9914863 25-03-1999 MI972086 A1 Α IT 15-03-1999 CA 2303098 A1 25-03-1999 DE 69809456 D1 19-12-2002 9914863 A1 WO 25-03-1999 EP 1018223 A1 12-07-2000 WO 9941851 19-08-1999 US 6337885 B1 Α 08-01-2002 AU 754945 B2 28-11-2002 AU 2650999 A 30-08-1999 2319392 A1 CA 19-08-1999 CN 1290430 T 04-04-2001 EP 1055293 A1 29-11-2000 JP 2002503912 T 05-02-2002 WO 9941851 A1 19-08-1999 TW 421933 B 11-02-2001